

---MAGMA---
Building manual V1.0

Congratulations on your MAGMA DIY kit, I hope you will enjoy the build and even more the finished module afterwards!

The parts are numbered corresponding the PCB. Follow the steps in order it is written down here.

Resistors

R1 = 1K5	R11 = 3K6	R21 = 3K6	R31 = 10K
R2 = 22K	R12 = 10K	R22 = 1K	R32 = 270R
R3 = 10K	R13 = 100K	R23 = 270R	R33 = 3K6
R4 = 100K	R14 = 47K5	R24 = 270R	R34 = 3K6
R5 = 1K5	R15 = 10K	R25 = 1K	R35 = 270R
R6 = 10K	R16 = 10K	R26 = 270R	R36 = 1K
R7 = 100K	R17 = 3K6	R27 = 100K	R37 = 1K
R8 = 10K	R18 = 0*	R28 = 47K5	R38 = 10K
R9 = 100K	R19 = 100K	R29 = 2K7	R39 = 3K6
R10 = 1K	R20 = 3K6	R30 = 10K	R40 = 10K

- *0 use a clipped of wire
- 5x 270R red - purple - black - black - brown
 - 5x 1K brown - black - black - brown - brown
 - 2x 1K5 brown - green - black - brown - brown
 - 1x 2K7 red - purple - black - brown - brown
 - 7x 3K6 orange - blue - black - brown - brown
 - 8x 10K brown - black - black - red - brown
 - 1x 22K red - red - black - red - brown
 - 2x 47K5 yellow - purple - green - red - brown
 - 6x 100K brown - black - black - orange - brown

Diodes notice the direction carefully!

D1-D8 = 1N4148	D9, D10 = 1N5817
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8x 1N4148 red glass diodes
2x 1N5817 black diodes

IC sockets notice the direction carefully!

IC1 = 8pin (TL072)	IC2, IC3 = 14pin (TL074)
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Capacitors

C1 - C6 = 100nF	C9 = 22uF mind direction!
C7 = 10uF mind direction!	C10 = 1uF
C8 = 100pF	C11 - C13 = 100uF* mind direction!

- 1x 100pF polyester cap
- 6x 100nF small yellow caps
- 1x 1uF red polyester WIMA
- 1x 10uF electrolytic cap
- 1x 47uF electrolytic cap
- 1x 22uF electrolytic cap *placed on the back

Transistors

Q1 - Q3 = 2N3904 mind direction!

LEDs on the back

Red LED on the bottom side of the hole

Yellow LED on the top side of the hole

LEDs have a polarity; notice the direction carefully! Long leg is "+"

Power header on the back

16pin boxed header

The header has a polarity; notice the direction drawn on the PCB carefully!

Now start with placing all the components which are connected to the frontpanel.
Don't solder anything before you placed the frontpanel.

Potentiometers

GAIN = green potentiometer 10Klin

CV att = blue tall trimmer 10Klin

RECOVERY = green potentiometer 10Klin

ENV = blue tall trimmer 10Klin

COMPRESS = green potentiometer 10Klin

RELEASE = blue tall trimmer 10Klin

Jack sockets

4x Jack sockets

LEDs

5x red LEDs

LEDs have a polarity; notice the direction carefully! Long leg is "+"

Switches

S1 = 6pin push button

S2 = 3pin toggle switch

Now place the frontpanel and fixate it with some nuts.
Only solder after you are sure that everything fits!

For the next step you have to remove the frontpanel again. Place the backpanel with the 4 screws and spacers.
Put the ball in the hole and place back the frontpanel. You are finished!!